

DARPA

TECHNOLOGIES

ADVANCED TECHNOLOGY BRANCH

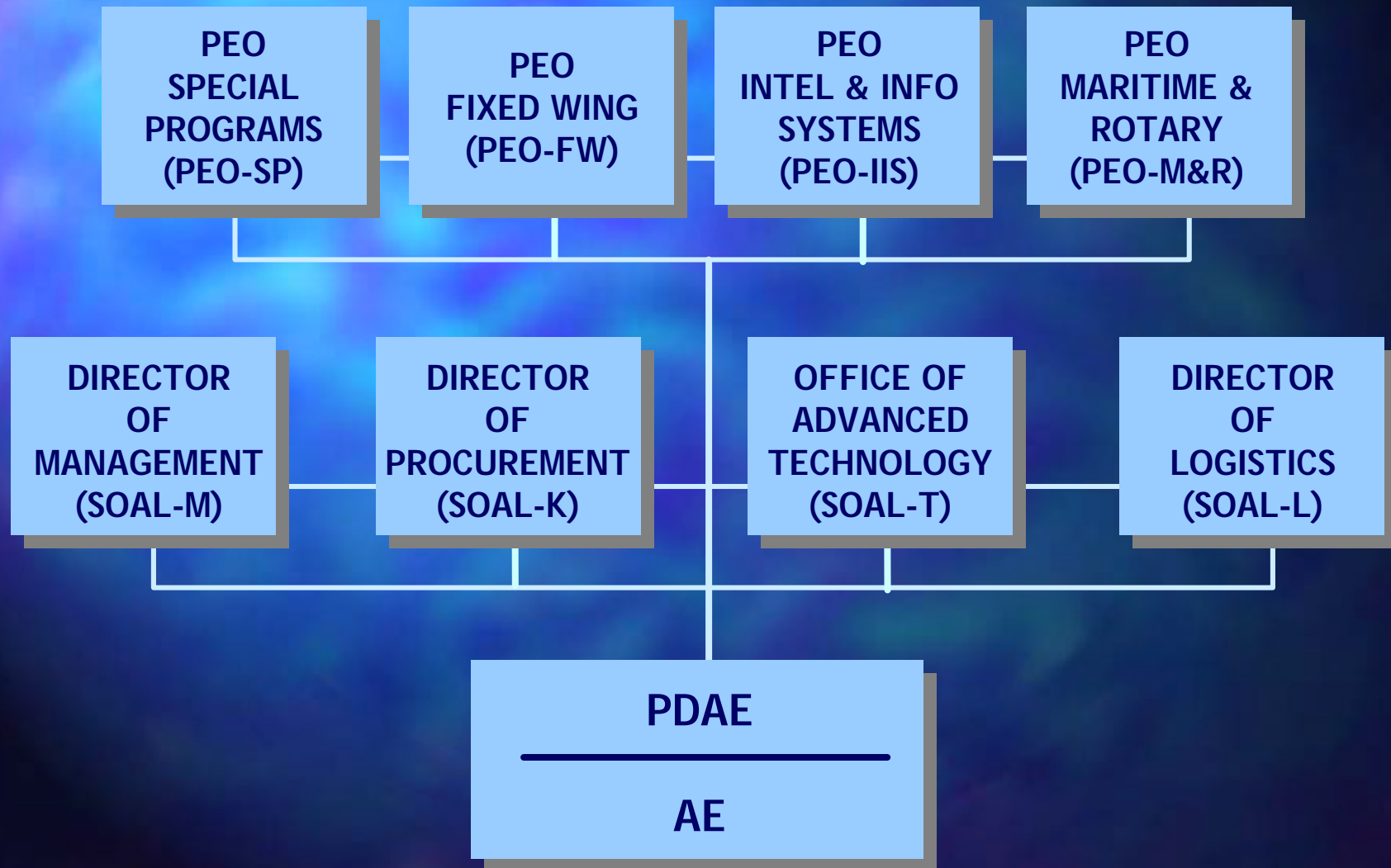


Special Operations Special Technology

6.3 like program conducts field evaluations of equipment and systems in SOF applications. Works closely with USSOCOM acquisition PEO's.

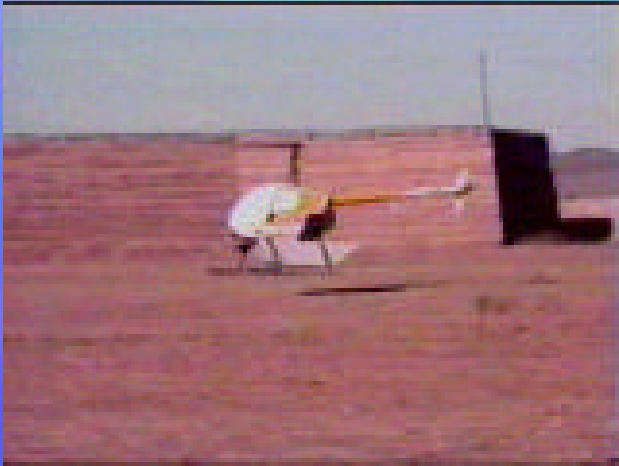


SOAL ORGANIZATION





SOF ROBOTICS



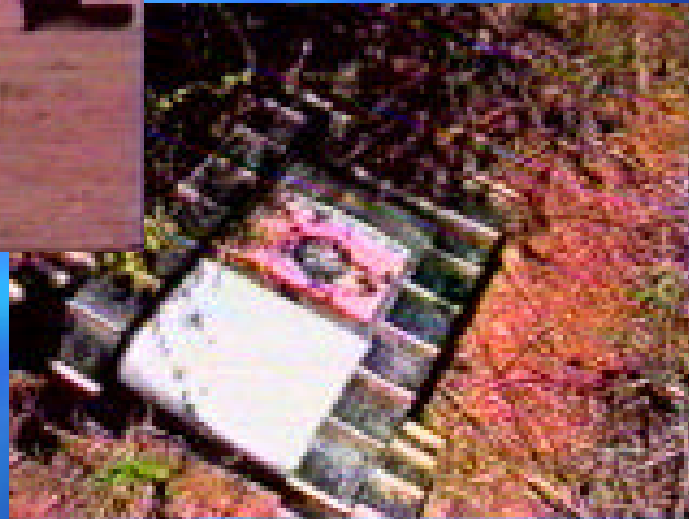
Reconnaissance
Resupply

Targeting

Mobile sensors

Mobile comms

DA



Fully integrated use of land, sea, and
air unattended platforms to support
SOF operations





ADVANCED BINOCULARS





ADVANCED REMOTE SENSORS

- ONBOARD PROCESSING
 - CLASSIFY TARGET
 - DF CAPABILITY
- RF LINKS





WEARABLE PROCESSORS

- DATA DISPLAY

Navigation

Situation

- COMMUNICATION

Text Messages

Images





COMMUNICATIONS

Emerging Commercial Systems



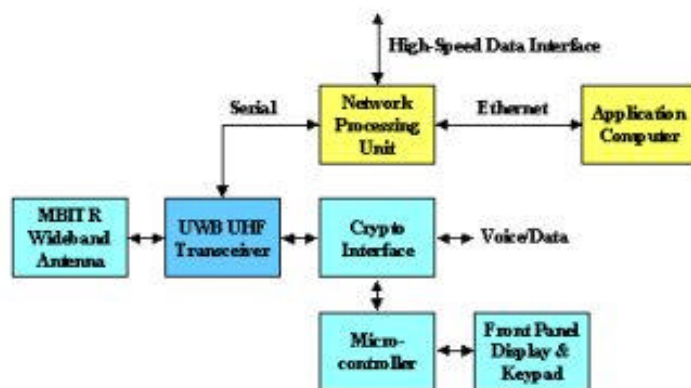


LP/LPD IMAGERY LINK

UWB Communications Ultra Wideband *Ad Hoc* Network Radios



 **MULTISPECTRAL SOLUTIONS, INC.**
Rockwell Collins **RACAL**



Design Characteristics

- Mobile *ad hoc* Network (MANET) radio
 - Multi-node, multi-hop
- Frequency-division multiplex/Time-division multiple access
 - Rockwell-Collins *Orthogonal Domain Multiple Access* (ODMA)
- Type 1 encryption
 - Racal *Multiband Inter/Intra Team Radio* (MBITR) interface
 - 128 kb/s voice, 115.2 kb/s data
- 1.544 Mb/s (T1) virtual channel
- 10W peak, > 20% fractional BW (VHF/UHF)
- Range
 - 1-2 km (node-to-node) with low profile, omni antennas



MINIATURE WEATHER

Man-portable and air-drop capable weather sensor package.

Features:

- Integrated wireless LEO SATCOM or LOS communications
- Measures pressure, humidity, temperature, wind, visibility and ceiling
- Component of UGS ACTD



AVI FILE





MOUNTED THERMAL



AVI FILE

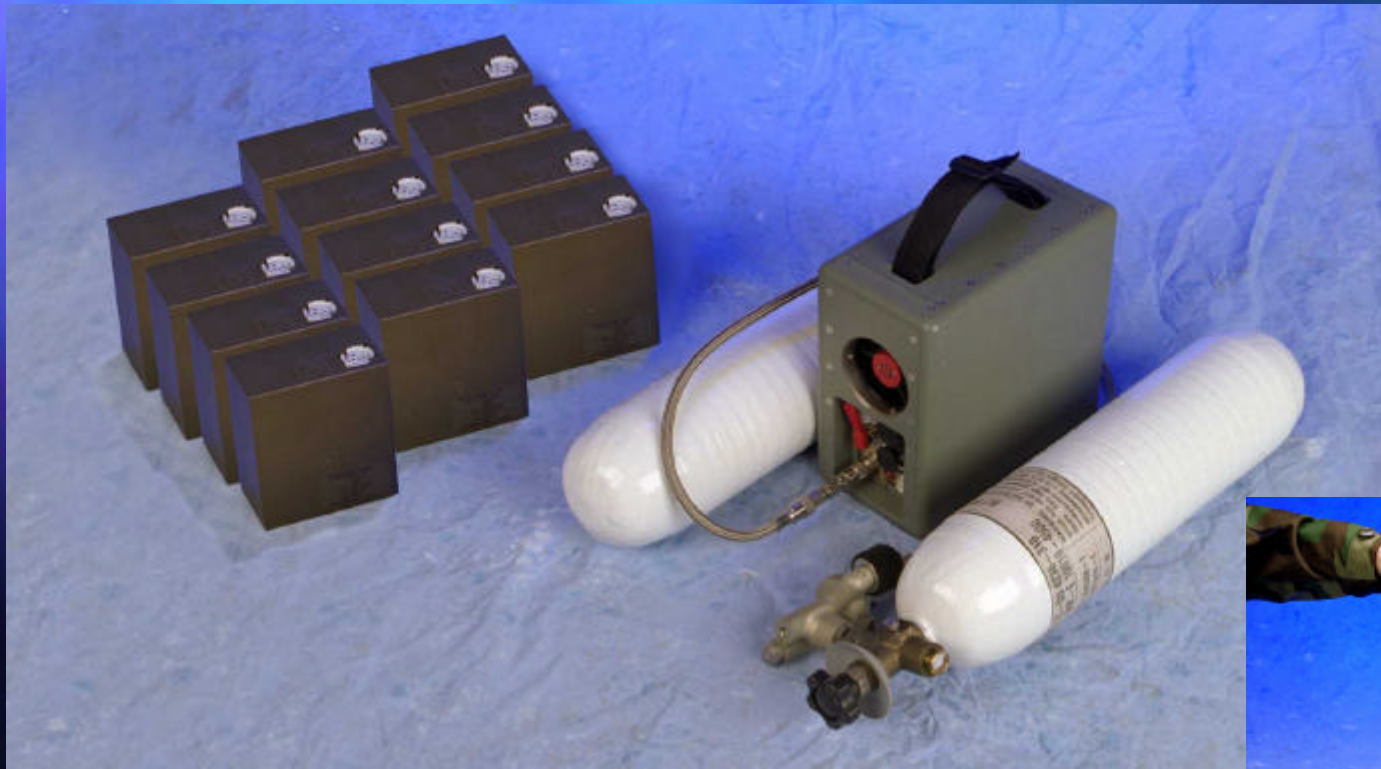
A lightweight, low-volume, low power helmet-mounted thermal viewer utilizing advanced uncooled infrared technology. The system provides the individual SOF operator hands-free vision capability in complete darkness and through obscurants.





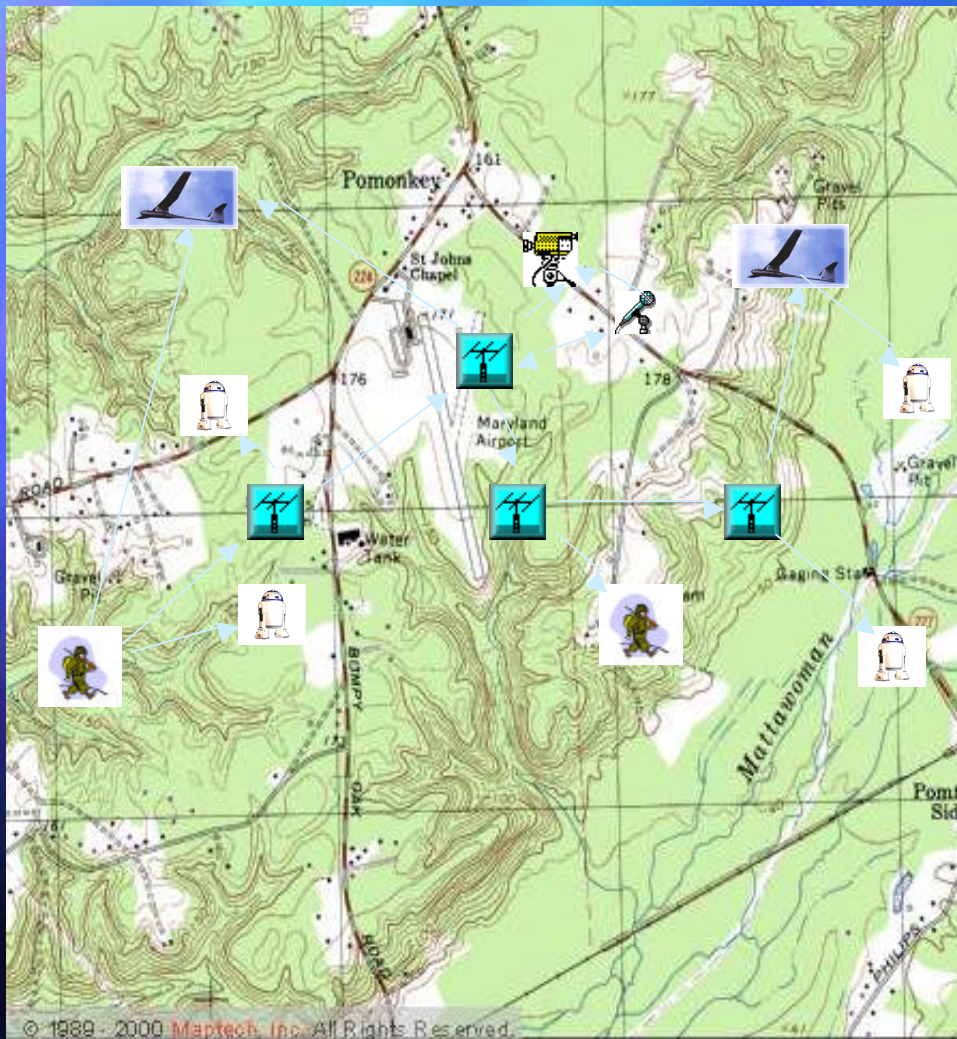
BATTERY RECHARGING SYSTEMS

Recharging systems will provide enhanced energy density over equivalent weight of primary batteries and still provide redundancy of supply.





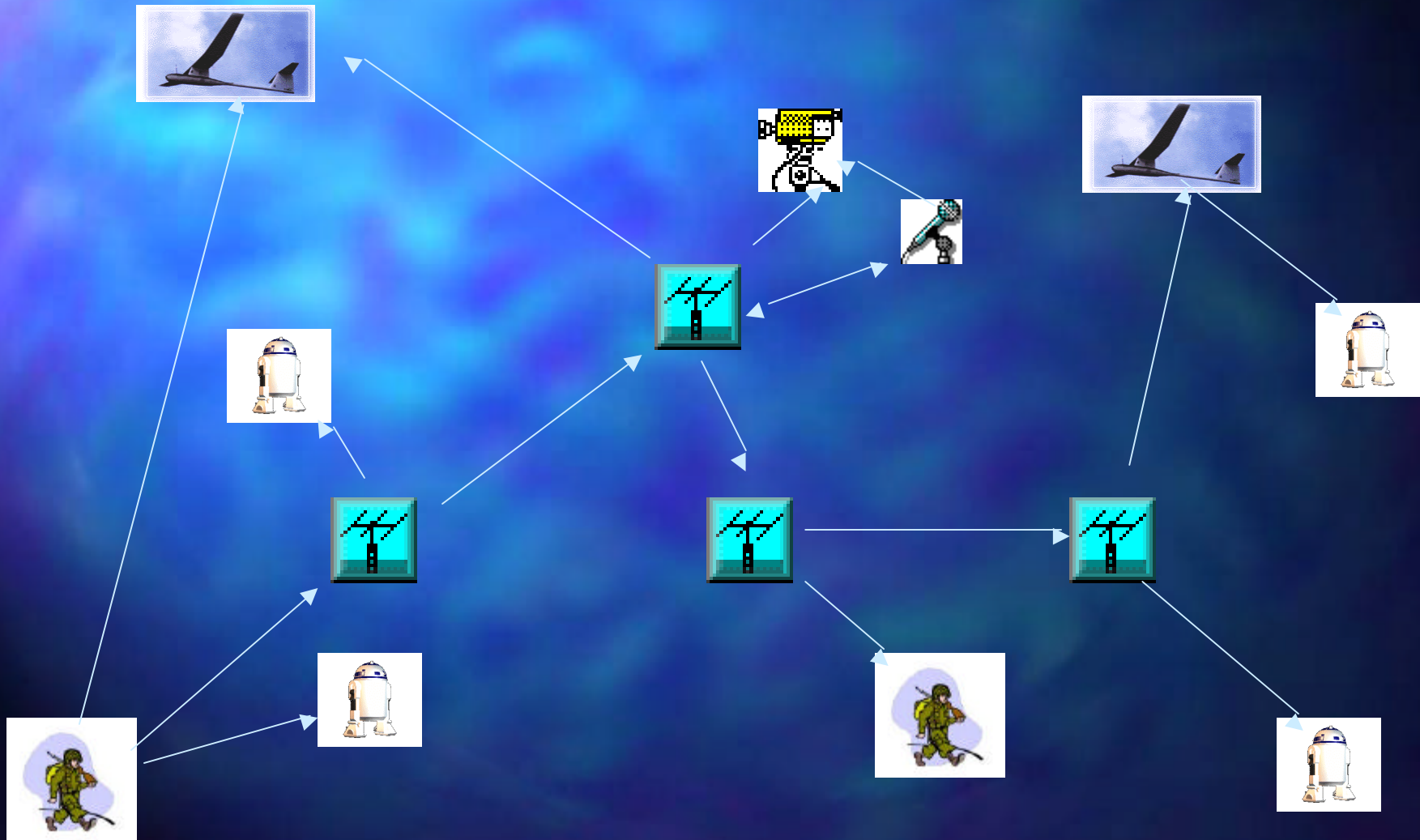
FUTURE CONCEPT OF OPS



- INTEGRATED NET OF COMMS AND SENSORS
- WEARABLE PROCESSORS
- REMOTE PLATFORMS
- THE ANSWER IS MORE POWER
 - WHAT'S THE QUESTION?



FUTURE CONOPS





IMPACT

Fully Coordinated, Integrated Operations

- Navigation
- Situational Awareness
- Targeting
- Reconnaissance
- C3





ON TARGET - ON TIME





SPECIAL WARFARE CRAFT

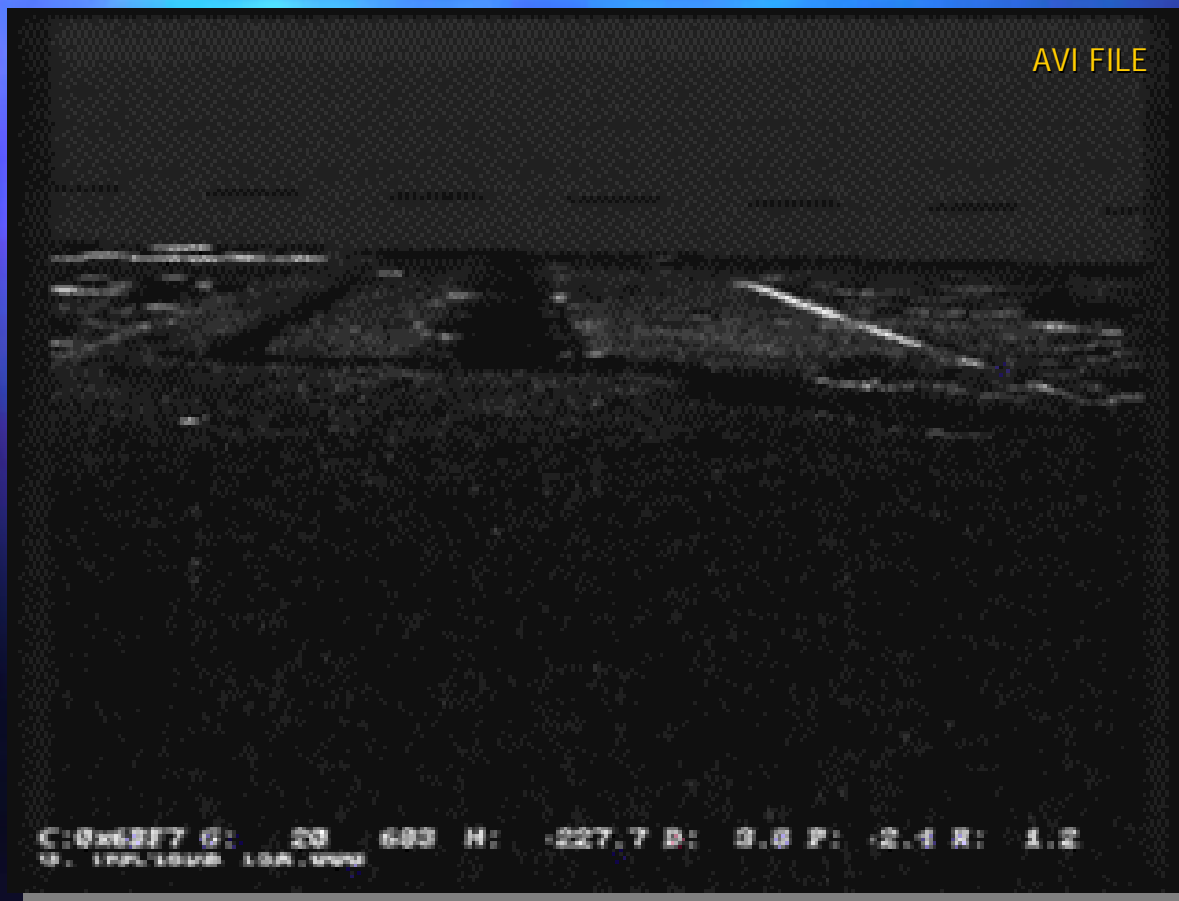


AVI FILE



LANDING GUIDANCE SYSTEM

Has the capability to provide enhanced navigation guidance for SOF aircraft approaching a landing field in adverse weather.



Features:
Intuitive
interpretation,
ground support
equipment not
required, and
provides
improved image
of runway.